

Claims

- 1) A method of wrapping products (2), characterized in that it comprises the steps of:
  - conveying a succession of products (2), each enveloped in a wrapper (11) of substantially parallelepiped box-like appearance, along a predetermined path (P);
  - subjecting each single product (2), in the course of its progress along the path, to a finishing operation that consists in deforming at least one part of the wrapper (11) in such a way as will cause the selfsame wrapper (11) to adhere closely to the surface of the relative product (2).
- 2) A method as in claim 1, comprising the further steps of assembling the products (2) into a group and enveloping the group in a leaf of wrapping material to form a stick pack (36) aligned on a predominating longitudinal axis (37).
- 3) A method as in claim 1, wherein the conveying step involves a step of restraining the product (2) enveloped in the relative wrapper (11) through the agency of respective gripping means (10) applied to two first faces (7, 8).
- 4) A method as in claim 1, wherein the finishing step involves a step of engaging and compressing at least one part of each product (2) enveloped by the

respective wrapper (11) through the agency of flexibly resilient gripping and deforming means (17).

5) A method as in claim 4, wherein the engaging and compressing action of the gripping and deforming means (17) is brought about through the agency of spring means (30).

10) 6) A method as in claims 3 and 4, wherein the engaging and compressing action of the finishing step is applied by the gripping and deforming means (17) in a direction transverse to the action of the gripping means (10), at least to two opposed portions of each product (2) enveloped in the respective wrapper (11).

15) 7) A method as in claim 6, wherein the finishing step is effected by the gripping and deforming means (17) during the course of the restraining step effected by the gripping means (10).

20) 8) A method as in claims 1 to 7, wherein the action of the gripping and deforming means (17) is applied at least to the portions of each product (2) destined, when assembled into a group, to coincide with the areas along which the longitudinal faces of the stick pack (36) are joined one to another.

9) A method as in claims 1 to 8 for wrapping products (2) of substantially parallelepiped appearance with corner edges presenting a bevelled or rounded or otherwise contoured profile, wherein the parts of the wrapper (11) associated with the opposed portions of the enveloped product (2) are caused, in the course of the finishing step, to assume the same contours as the product (2).

10) A device for wrapping products (2), characterized in that it comprises

- a conveyor (9), set in motion along a predetermined path (P) and serving to advance a succession of products (2), each enveloped in a respective wrapper (11) of substantially parallelepiped box-like shape;
- a finishing station (15) positioned along the path (P) and equipped with gripping and deforming means (17) such as will engage and compress at least a part of each product (2) in such a way as will cause the wrapper (11) to adhere closely at least to the part of the product (2) subjected to the gripping and deforming action.

11) A device as in claim 10, wherein the conveyor (9) comprises a plurality of gripping means (10), each serving to restrain a respective product (2).

25 12) A device as in claim 10, wherein the action of the gripping and deforming means (17) is applied to

the product (2) in a direction transverse to the action of the gripping means (10).

13) A device as in claim 10, comprising spring means (30) acting on the gripping and deforming means (17) in such a way as to shift the selfsame gripping and deforming means (17) when applying the engaging and compressing action.

14) A device as in claim 11, wherein the conveyor (9) is a rotary conveyor set in rotation around a respective axis (A1), and the gripping means (10) comprise a plurality of first grippers (12) mounted radially to and equispaced angularly around the periphery of the rotary conveyor (9).

15) A device as in claim 14, wherein the first grippers (12) are furnished with resilient pads (14) and designed to restrain the respective product (2) by engaging two first faces (7, 8).

16) A device as in claim 10, wherein the gripping and deforming means (17) comprise at least one second gripper (18) equipped with at least two jaws (19) carrying respective flexibly resilient gripping and deforming pads (20) positionable respectively against at least two opposing portions of each product (2).

- 17) A device as in claims 13 and 16, wherein the second gripper (18) comprises respective transmission means (24), operated by respective drive means (22), by which the respective jaws (19) are moved between a 5 limit position distanced from the product (2), opposing the engaging and compressing action of the spring means (30), and a limit position of engagement with the product (2), subject to the action of the spring means (30).
- 10 18) A device as in claim 17, wherein the drive means (22) comprise cam means (23) acting on respective cam follower means (23a) mounted to the drive means (24).
- 15 19) A stick pack comprising a group of products (2) wrapped by the method of claim 1, enveloped in a leaf of wrapping material to form a stick (36) aligned on a predominating longitudinal axis (37), wherein the areas (38) along which the longitudinal side faces are joined one to another adhere closely to the portions of the product (2) subjected to the action 20 of the gripping and deforming means (17).